

Books on Demand and ePublishing: A Natural Progression

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In January, 2001, CAP Ventures predicted that within five years, 80 percent of all print will be ordered via the World Wide Web and that a fundamental change will occur with the way books are sold: "...books will increasingly be sold then printed or presented as opposed to being printed and then sold." This represents a new publishing model that is indicative of the transformation from traditional publishing to ePublishing.

Books on demand, which is often referred to as print on demand, are experiencing growth in the ePublishing sector for the same reasons that electronic books are growing: distribution, technology, and unlike electronic books, profit. Books on demand can be defined as the use of a digital printer to print a paper book when needed in quantities ranging from one copy to hundreds of copies. Typically, the book is stored in digital format, usually as a collection of PDF, Post-Script, or TIFF files, that can be printed on a digital printer and packaged, such as bound or shrink-wrapped, and then shipped to the customer directly from the printer. Not only can the book be printed one at a time but the book can be printed in black and white or color using digital color printers. A single copy of a 300 page book can be printed in less than one minute and bound in less than five minutes.

Digital Printers

The print industry's increasing use of digital printers, which are defined as printers that input digital data streams and output pages printed on paper, is fueling the market for books on demand. Digital printers include:

- Direct imaging digital offset printers. These are basically offset printing presses that enable digital content to go directly to the press.
- Electrographic printers. These are essentially laser printers that fuse toner on paper. They are the most common type of digital printers used for books on demand or print on demand.
- Ink jet printers. These printers are typically used for wide format paper such as posters and are not used for books on demand.

One reason for the growing popularity of digital printers is the average number of copies printed per job dropped by 25 percent during the 1990s. Shorter press runs mean less efficiency for traditional offset lithography printers because the setup or make-ready times and paper waste are essentially the same for all traditional offset print jobs. Shorter press runs also require printers to spend a greater percentage of their time scheduling jobs.

Digital printing systems do not require make-ready time and significantly reduce paper waste. Furthermore, production time from start to finish is quicker on digital printers because time does not have to be allocated for ink to dry before post-processing, such as binding, can begin. These are important reasons why printers who publish books using offset lithography presses are adding digital printers to their print facilities. (It should be added that scheduling of print jobs also is being addressed with digital technology in the form of tools to manage digital workflow.)

Rick Voytko, an IBM expert in books on demand, recalls how a printing firm with traditional offset printing presses installed a digital printer because its customers had been asking to print small numbers of books. The printer's ability to handle short print jobs economically and quickly opened up a new market. Digital printing helped the printing firm to serve a new set of customers that it could not serve before.

Digital Workflow Equals Savings

Books on demand and print on demand are popular with both printers and publishers because unlike the current generation of electronic books, there are clear cost savings for the publisher. The workflow to create a book to be printed on an offset press is the same as the workflow to create a book to be printed on a digital printer. Thus a publisher and printer could produce the first edition of a book on an offset press and then print smaller subsequent runs on a digital printer without having to recreate the source files.

Minimizing Risk In the Lifecycle of a Book

An important element of books on demand to understand is the typical lifecycle of a book. Voytko describes it as a bell curve: at the beginning of the bell curve, sales are typically slow as marketing efforts and reviews build demand. Once demand has increased, sales increase and eventually reach a plateau. From the plateau, sales decrease until the book goes out-of-print.

For the first printing, books are usually produced in large enough quantities to justify traditional offset printing. After printing and binding the books are stored in warehouses or shipped to distributors. Publishers accept a great deal of risk when they commit to the length of press runs for first editions based on their estimates of potential sales. If book sales fail to ramp up as projected, the publisher faces returns, which must either be warehoused, sold to discounters, or destroyed. If the sales ramp up more quickly than projected, the publisher may decide to do a second printing, which entails even more risk.

When demand slackens and a book goes out-of-print, it may not be because there are no customers or back orders for the book, but instead it may be too expensive to print a quantity of books using an offset press. Even if there are customers and back orders for a book, the number must be large enough to justify offset printing. This is where books printed on demand using digital printers can extend the lifecycle of a book indefinitely.

IBM provides this description about the benefits of books on demand: “For books nearly or completely out of print, the technology represents a new lease on life. A book in low supply can be downloaded from electronic storage and digitally printed in the desired amount. An extant copy of an out-of-print book can be acquired from a library, warehouse, or private source, and can be scanned, printed, and digitally stored.” Thus the bell curve flattens out endlessly and a book need never go out of print.

Voytko sums up books on demand by stating: “The real benefit of books on demand is that publishers can better manage the lifecycle of a book and reduce their risk while enabling authors to gain incremental sales that would have ended when the book went out of print.”

Authors and Publishers: ePublishing Benefits

Because the technology provides a cost effective method to print small quantities of books, authors and publishers can realize these ePublishing benefits:

- Build to order. Publishers do not have to estimate how many books to print; they can print the books as orders come in. In essence, publishers now have just-in-time manufacturing which was not possible with offset printing.
- Eliminates warehouse costs. Most business models for books on demand are based on centralized print facilities where orders come in for books, the books are printed, and shipped immediately. This eliminates warehouse costs for stocking books.
- Enables niche publishing because the fixed costs of printing the book are less than the fixed costs of offset printing, and small quantities of books can be printed at costs far less than offset printing.
- Complements electronic books as workflow for publishing an eBook and a paper book are very similar. Once the content is written, the content can be converted into a format, such as PDF, PostScript, or TIFF files that can be stored electronically for printing.

- Eliminates out of print books as a book can be printed when needed. This enables established authors to offer their books again to their audience and enables publication of books that are in public domain. (An issue with this is that if an author's book never goes out of print because the book can be stored digitally and printed when needed, then the rights to that book would not revert back to the author as is the case when the book goes out of print. This is an issue for authors, agents, and publishers to sort out.)

Customization of Books

A feature of books on demand that can drive acceptance is the ability to customize the book before printing the book. This customization is often referred to as variable publishing. Here are some examples of how books that are stored in digital format for printing on a digital printer can be customized:

- Customers want their names inscribed on the front cover or want a unique cover customized with images or text they choose, such as their company logo.
- Publishers offer customers a choice of covers for the book.
- Publishers offer customers the option to pick and choose which parts of the books they want to print. If the book is a reference book, customers might only want to buy specific chapters (perhaps for use in course packs as described below).
- Publishers offer to combine college text book with class lecture notes and materials, which are often referred to as course packs. Many colleges now offer course packs, to students via print on demand; these course packs could easily be combined with the textbook into one printed package.
- Customers pay authors to add unique content to books specifically written for the customer's company. For example, a customer might buy a motivational book for her company and ask that the book be printed with a chapter on the company's history. Or a company has a specific technology they would like featured in a book. Books could be customized per customer order to add content unique to that customer.

What is the Difference? Ink Versus Toner?

At the National Institute of Standards and Technology's "Electronic Book 2000: Changing the Fundamentals of Reading" conference, I participated as an exhibitor where I described the IBM books on demand solution. Here are a few observations, which I found surprising, from the conference:

1. Many people were familiar with the concept of books on demand. I assumed everyone was familiar with the technology that enables a single book to be printed, economically and quickly, from a digital printer. But many of the people I spoke with assumed all books were still printed in large quantities on offset printers with ink and not on digital printers with toner. The idea that it is possible to print a single book with quality that matches offset printing was quite surprising to many people.
2. When people looked at the examples of books that were printed on a digital printer, they could not tell the difference between digital and offset printing. They also were impressed that not only were the pages printed digitally but so were the covers in multiple colors.
3. The book sellers and distributors who offer electronic books were very interested in books on demand as they have discovered that many customers who shop on the Internet for books want a choice between electronic and paper or both. Interest in electronic books often fuels interest in the paper version too. Like electronic books, books on demand provides an economical solution to fulfilling requests for niche books as well as "out of print" books.

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